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on July 9, 2007

Roberta A. Winzeler
(Name)

Roberta A. Winzeler
(Signature)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
Robert J. Boisselle, et al.	)	Group Art Unit: 1731
	)	
Serial No.: 10/669,745	)	Examiner: Jason L. Lazorcik
Filed: September 24, 2003	)	
	)	
For: PRESS BENDING STATION FOR THE BENDING OF GLASS SHEETS	)	Attorney Docket: 1-15957

July 9, 2007

MAIL STOP APPEAL BRIEF – PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Honorable Sir:

This brief is in furtherance of the Notice of Appeal, in connection with the above-captioned application, which was mailed on April 17, 2007 and was received in the U.S. Patent and Trademark Office on April 23, 2007.

The fees set forth in 37 CFR 41.20(b)(2) are being submitted herewith.

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1. Real Party in Interest

The real parties in interest are Pilkington North America, Inc. and Pilkington Automotive Deutschland GmbH, each of which is a wholly owned subsidiary of Pilkington Group Limited, which in turn is a wholly owned subsidiary of Nippon Sheet Glass Co. Limited of Japan. The assignment to Pilkington North America, Inc. and Pilkington Automotive Deutschland GmbH, was recorded on October 28, 2004, at reel 015986, frame 0679.

2. Related Appeals and Interferences

There is no known related appeal or interference that will directly affect or be directly affected by, or have a bearing on, the Board's decision in this Appeal.

3. Status of Claims

The status of each of the claims is as follows:

1) Claims canceled: 1, 5, 7, 17, 18

2) Claims withdrawn from consideration but not canceled: None

3) Claims pending: 2-4, 6, 8-16, 19, 20, and 21

4) Claims allowed: None

5) Claims objected to: 20

6) Claims rejected: 2-4, 6, 8-16, 19, and 21

Applicants choose not to appeal the objection to claim 20, thus the claims involved in the appeal are claims 2-4, 6, 8-16, 19, and 21. A copy of the claims on file is submitted in the attached Claims Appendix.

4. Status of Amendments

An Amendment under 37 C.F.R. 1.116 dated March 9, 2007 was filed in response to an Office Action dated December 18, 2006. Applicants proposed an amendment to claim 20, however, the Examiner did not enter said Amendment.

5. Summary of Claimed Subject Matter

The present invention, as set forth in independent claim 19, defines a press bending station 4 (see, for example, Figs. 1 and 2) having two opposing molds 5, 6 (see, for example, page 12, line 23 to page 13, line 6 and Figs. 1 and 5), the first mold 5 having a major surface (see, for example, page 16, line 24 to page 17, line 8 and Fig. 5) with at least one peripheral annular groove 11 (see, for example, page 8, lines 15-22 and Figs. 3-5) thereon, at least one hole 10 (see, for example, page 8, lines 15-22 and Figs. 3-5) defined therein, the hole 10 being disposed in fluid communication with the at least one peripheral annular groove 11 (see, for example, page 9, lines 13-20 and Figs. 3-5) and selectively connected to a negative pressure source for holding material 2 (see, for

example, page 9, lines 13-20 and Figs. 1-5) to the surface (see, for example, Figs. 3-5), thus allowing the material 2 to be shaped into a part (see, for example, Figs. 1-5) when the molds 5, 6 are urged together (see, for example, Abstract and Figs. 3-5).

The present invention, as set forth in independent claim 21, defines a press bending station 4 (see, for example, Figs. 1-2) for the bending of glass sheets 2 (see, for example, Fig. 5), having a full-face mold 6 (see, for example, page 12, line 23 to page 13, line 6 and Figs. 1 and 5) having a mold face (see, for example, page 16, line 24 to page 17, line 8 and Fig. 5), the mold face having at least one peripheral annular groove 11 (see, for example, page 8, lines 15-22 and Figs. 3-5) formed in the surface thereof, the at least one peripheral annular groove 11 (see, for example, page 8, lines 15-22 and Figs. 3-5) having a plurality of holes 10 (see, for example, page 8, lines 15-22 and Figs. 3-5) located therein; and an annular mold 5 (see, for example, page 12, line 23 to page 13, line 6 and Figs. 1 and 5); wherein, the at least one peripheral annular groove 11 is formed in a peripheral area (see, for example, page 8, lines 15-22 and Figs. 3-5) that corresponds to the molding contact area (see, for example, Figs. 1-5) where a glass sheet 2 is pressed between the full-face mold 6 and the annular mold 5 (see, for example, Abstract and Figs. 3-5).

6. Grounds of Rejection to be Reviewed on Appeal

The issues for appeal are:

A) Claims 2, 3, 4, 9, 15, 16, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montonen (U.S. Patent No. 5,383,947, hereinafter Montonen) in view of Posney (U.S. Patent No. 3,595,636, hereinafter Posney).

B) Claims 6, 8, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined prior art teachings of Montonen and Posney as applied to claims 19 and 21, and further in view of Yoshizawa (U.S. Patent No. 5,139,552, hereinafter Yoshizawa).

7. Argument

A) Claims 2, 3, 4, 9, 15, 16, 19, and 21 are patentable over Montonen in view of Posney.

Specifically regarding independent claims 19 and 21, the Examiner asserts that Montonen teaches a press bending mold comprising an upper, curved or "full-face" mold surface and a complimentary lower supporting ring mold or "annular mold." The Examiner further asserts that Montonen clearly teaches the presence of a narrow annular port (5) or peripheral annular "groove" which is connected with a suction channel (7) or "to a negative pressure source" (Column 1, Lines 52-64). The Examiner states that

Montonen clearly depicts in Fig. 2 the annular channel or "groove" being formed in a region corresponding to "the molding contact area where a glass sheet is pressed between the full-face mold and the annular mold."

With respect to the identified dependent claims, the Examiner asserts that since the source of negative pressure is a fan 8, then simply running the fan in reverse would yield the claimed communication between the groove and a positive pressure source as set forth in claim 3. Further, the Examiner alleges that as set forth in claim 9, Montonen teaches the presence of a "porous mold structure in the surface (12) of the full face mold." Thus, the Examiner says that the disclosure is read in the instant claim as providing additional flow channels and through-holes in the molding face of the full-face mold inside the area enclosed by the peripheral annular groove.

With respect to claims 15 and 16, the Examiner asserts that Montonen teaches that the full-face mold can be constructed of "a ceramic mass" (Column 2, line 65) and that electrically resistive heating elements can be provided (Column 3, Lines 9-26) in order to heat the mold.

The Examiner asserts that Montonen teaches a continuous groove or "slotted annular structure" but concedes that Montonen remains silent regarding the presence of a plurality of holes located within the annular groove.

The Examiner then asserts that Posney teaches a structured mold having an apertured wall contoured to the desired shape of the bent glass sheet and having

elongated, shallow grooves and a row of apertures contained therein for delivery of fluid under pressure to the surface of the glass sheet. With respect to the structure of the mold surface, the Examiner asserts that Posney clearly sets forth that the recessed aperture structure in the disclosed mold is "less fragile than molds slotted throughout their entire thickness" (Column 2, Lines 63-69).

From this the Examiner concludes that where the peripheral annular groove of the Montonen mold is understood to embody a structure "slotted through the entire thickness," it would have been obvious to adopt the aperture-in-groove structure taught by Posney. The Examiner further concludes that the modification of the Montonen structure to include holes or apertures within the annular groove would have been an obvious alteration to one of ordinary skill in the art, at the time of the invention, seeking to make the mold structure less fragile as taught by Posney. Under the combined teachings of Posney and Montonen, the Examiner asserts that the holes would be connected together by the at least one peripheral annular groove as set forth in claim 6.

As set forth in the Advisory Action Detail of April 3, 2007, the Examiner acknowledges that applicants asserted that the Montonen suction port (5) fails to satisfy the claimed limitation of at least one peripheral annular groove formed on/in the surface of the male mold. The Examiner disagrees and alleges that, as clearly depicted in Montonen's Fig. 2, at least mold elements 4 and 2 present a molding surface to the glass sheet 1 as indicated by the annotation lines. Therefore, elements 4 and 2 would be

conventionally recognized collectively as a pressing face or alternatively as a "surface of the male mold." With this point in mind, the Examiner states that it is clear that the peripheral annular groove 5 is formed "in/on the surface of the male mold."

Further, with respect to the Montonen/Posney rejection, the Examiner states that applicant argues that holes can not be defined in Montonen's suction port 5, which is simply a void or a space. Here, the Examiner disagrees with applicants' interpretation of the Posney reference. Specifically, the Examiner asserts that Posney argues that molds utilizing the disclosed "recessed apertured structure . . . are less fragile than molds slotted throughout their entire thickness" (Column 2, lines 62-69).

The Examiner continues by asserting that, rather than defining holes in a void, which is clearly inoperative on its face, Posney renders it obvious to substitute the disclosed "recessed aperature structure" in place of a groove which is "slotted through the entire thickness" of the mold. As presented in the previous Office Action, this modification would be obvious for one of ordinary skill in the art to be aware of both prior art references as a means to decrease the fragility of the mold structure.

A-1) Claim 19

Applicants traverse the rejection under 35 U.S.C. 103(a) of claim 19 as being unpatentable over Montonen in view of Posney by asserting that independent claim 19 requires at least the limitations of the first mold having a major surface with at least one peripheral annular groove thereon.

Regarding the Examiner's assertion that Montonen's wall 4 can be considered part of the mould 2, applicants' find that Montonen does not teach that the bottom right edge (as viewed in Fig. 2) of the wall 4 is part of the surface of the curved mould surface 12. Instead, the mould 2 is separated by the suction port 5 in conjunction with the large channel 6 (see column 1, lines 56-59). Also, the wall 4 only provides a seal with the edge 14 of the glass sheet but does not form any part of a pressing surface (see column 1, lines 54-56) as Fig. 2 clearly shows.

Further, it follows that Montonen does not have an annular groove formed in the mould face surface 12, since Fig. 1 does not show any groove in the mould face surface 12. Therefore, Montonen's port 5 and channel 6 do not satisfy the claimed limitation of the annular groove formed on the surface of the mould 2, since the port 5 and the channel 6 are radially disposed away from the mould 2.

Specifically regarding the Examiner's statement that "the press bending elements 2 and 4 would be conventionally recognized collectively as a pressing face or alternatively as the surface of the male mold," applicants find Montonen to contradict this statement by the Examiner, where Montonen discloses that "press bending is effected between an upper curved mold surface 12 and a lower ring mold 13" (see Abstract). Thus, the wall 4 is not part of the male mold surface. In fact, Montonen teaches "in other words, glass 1 has no tendency of pressing against the mould surface 12 at this suction port" (see, column 2, lines 10-12, emphasis added).

Applicants agree with the above-stated Examiner's concession that Montonen remains silent regarding the presence of at least one hole therein an annular groove. Since Montonen's suction port 5 is a void, then Montonen cannot have a hole(s) defined therein, as claim 19 requires.

In addition, the instant disclosure teaches that:

> "A further advantageous effect of the groove(s) provided according to the invention lies in the fact that a partial vacuum is distributed not only very quickly, but also very uniformly over the molding face of the full-face mold. This also helps to promote the accuracy of the shaping (see, column 2, lines 10-12, emphasis added)."

There is no disclosure in Montonen that indicates that the suction port 5 uniformly distributes a partial vacuum over the molding face of the full-face, as the subject disclosure indicates.

Since Montonen does not have a peripheral annular groove on the major surface 12 of the mould 2, then logic dictates that Montonen cannot satisfy the claimed invention, which requires at least one hole defined in the peripheral annular groove.

Regarding the Examiner combining Montonen with Posney in these 35 U.S.C. 103 rejections, applicants find that neither Montonen nor Posney provides a suggestion or motivation to combine one document (i.e., Montonen) that "suctions" a glass sheet 1 toward a mould surface 12 using a suction port 5 to form the glass sheet 1, with another

document (i.e., Posney) that teaches "blasting cool air" onto a glass sheet G in order to "temper" the glass sheet G. In fact, Posney does not draw a vacuum in the grooves and/or holes in order to form the glass sheet G. Thus, it is respectfully submitted that the Examiner's combination of references is not proper and must be overturned. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1550, 220 USPQ 303, 311 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (it is error to consider "references in less than their entireties ...".)

In addition, Posney does not teach annular grooves with holes defined in the surface 12 of the convex mold 10, as claim 19 requires. Instead, Posney "horizontally" disposes elongated slots 70 within the surface 12 of the mold 10 (see, for example, column 4, lines 38-42 and Figs. 1-3).

Regarding the Examiner's implication that Montonen's mould 2 is slotted throughout and can be combined with Posney (where the Examiner states that molds having a "recessed apertured structure . . . are less fragile than molds slotted throughout their entire thickness") to result in the claimed invention, applicants assert that since Montonen's mould 2 is not slotted nor is it slotted throughout, then the combination of Montonen and Posney is improper.

Therefore, Posney does nothing to overcome the above-stated shortcomings of Montonen. Hence, claim 19 is patentable over Montonen in view of Posney, as the claimed invention defined thereby is not suggested within either Montonen or Posney, nor

is there any suggestion or motivation to modify or combine these references' teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103. Consequently, claim 19 should be allowed over Montonen in view of Posney.

A-2) Claims 2, 3, 4, 9, 15, 16, and 21

Applicants traverse the rejections under 35 U.S.C. 103(a) of claims 2, 3, 4, 9, 15, 16, and 21 as being unpatentable over Montonen in view of Posney by asserting that independent claim 21, from which claims 2, 3, 4, 9, 15, and 16 directly or indirectly depend, requires at least the limitations of a full-face mold having a mold face, the mold face having at least one peripheral annular groove formed in the surface thereof.

Regarding the Examiner's assertion that Montonen's wall 4 can be considered part of the mould 2, applicants find that Montonen does not teach that the bottom right edge (as viewed in Fig. 2) of the wall 4 is part of the surface of the curved mould surface 12. Instead, the mould 2 is separated by the suction port 5 in conjunction with the large channel 6 (see column 1, lines 56-59). Also, the wall 4 only provides a seal with the edge 14 of the glass sheet but does not form any part of a pressing surface (see column 1, lines 54-56) as Fig. 2 clearly shows.

Further, it follows that Montonen does not have an annular groove formed in the mould face surface 12, since Fig. 1 does not show any groove in the mould face surface 12. Therefore, Montonen's port 5 and channel 6 do not satisfy the claimed limitation of

the annular groove formed on the surface of the mould 2, since the port 5 and the channel 6 are radially disposed away from the mould 2.

Specifically regarding the Examiner's statement that "the press bending elements 2 and 4 would be conventionally recognized collectively as a pressing face or alternatively as the surface of the male mold," applicants find Montonen to contradict this statement by the Examiner, where Montonen discloses that "press bending is effected between an upper curved mold surface 12 and a lower ring mold 13" (see Abstract). Thus, the wall 4 is not part of the male mold surface. In fact, Montonen teaches "in other words, glass 1 has no tendency of pressing against the mould surface 12 at this suction port" (see, column 2, lines 10-12, emphasis added).

Applicants agree with the above-stated Examiner's concession that Montonen remains silent regarding the presence of at least one hole therein an annular groove. Since Montonen's suction port 5 is a void, then Montonen cannot have a hole(s) defined therein, as claim 19 requires.

In addition, the instant disclosure teaches that:

> "A further advantageous effect of the groove(s) provided according to the invention lies in the fact that a partial vacuum is distributed not only very quickly, but also very uniformly over the molding face of the full-face mold. This also helps to promote the accuracy of the shaping (see, column 2, lines 10-12, emphasis added)."

There is no disclosure in Montonen that indicates that the suction port 5 uniformly distributes a partial vacuum over the molding face of the full-face, as the subject disclosure indicates.

Since Montonen does not have a peripheral annular groove in the major surface 12 of the mould 2, then logic dictates that Montonen cannot satisfy the claimed invention, which requires at least one peripheral annular groove having a plurality of holes located therein (see claim 21).

Regarding the Examiner combining Montonen with Posney in these 35 U.S.C. 103 rejections, applicants find that neither Montonen nor Posney provides a suggestion or motivation to combine one document (i.e., Montonen) that "suctions" a glass sheet 1 toward a mould surface 12 using a suction port 5 to form the glass sheet 1, with another document (i.e., Posney) that teaches "blasting cool air" onto a glass sheet G in order to "temper" the glass sheet G. In fact, Posney does not draw a vacuum in the grooves and/or holes in order to form the glass sheet G. Thus, it is respectfully submitted that the Examiner's combination of references is not proper and must be overturned. (W.L. Gore & Associates, Inc. v. Garlock, Inc.)

In addition, Posney does not teach annular grooves with holes located therein the surface 12 of the convex mold 10, as claim 21 requires. Instead, Posney "horizontally" disposes elongated slots 70 within the surface 12 of the mold 10 (see, for example, column 4, lines 38-42 and Figs. 1-3).

Regarding the Examiner's implication that Montonen's mould 2 is slotted throughout and can be combined with Posney (where the Examiner states that molds having a "recessed apertured structure . . . are less fragile than molds slotted throughout their entire thickness") to result in the claimed invention, applicants assert that since Montonen's mould 2 is not slotted nor is it slotted throughout, then the combination of Montonen and Posney is improper.

Therefore, Posney does nothing to overcome the above-stated shortcomings of Montonen. Hence, claims 2, 3, 4, 9, 15, 16, and 21 are patentable over Montonen in view of Posney, as the claimed invention defined thereby is not suggested within either Montonen or Posney, nor is there any suggestion or motivation to modify or combine these references' teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103. Consequently, claims 2, 3, 4, 9, 15, 16, and 21 should be allowed over Montonen in view of Posney.

B) Claims 6, 8, and 10-14 are patentable over the combined prior art teachings of Montonen and Posney as applied to claim 21, and further in view of Yoshizawa.

With regard to claims 6, 8, and 10-14, the Examiner concedes that Montonen is silent regarding the dimensions of the annular groove, the location of the groove on the mold surface, and the presence and/or details of an air-permeable cover for the mold face. As set forth in a previous office action on the merits, the Examiner asserts that

Yoshizawa lays out analogous art teachings directed to the bending of glass sheets with a structured mold surface. The Examiner continues by asserting that, specifically, the Yoshizawa mold contains a plurality of grooves defined within the mold surface and a plurality of inlet/outlet ports defined in each of the grooves. The Examiner concludes from this that it would be reasonable for one of ordinary skill in the art, at the time of the invention, to have been fully aware of the Yoshizawa teachings and to look to said teachings for further detail regarding the structure of glass sheet press bending molds.

The Examiner continues by asserting that per the limitation set forth in applicants claim 6, the Montonen Fig. 2 clearly shows that the peripheral annular groove is set in from the outer edge of the glass sheet, but, the instant reference provides no limitations upon the distance. Referring to the Yoshizawa reference (column 3, lines 65-68), the Examiner asserts the "raised ridges or lands for contact with the glass sheet" have a width X ranging from 0.5 mm to 10 mm. The Examiner concludes from this that it is, therefore, understood from Fig. 5 that "the groove" is arranged approximately 0.5 mm to 10 mm from the edge of the glass sheet. Also, the Examiner states that it would be reasonable for one of ordinary skill in the art at the time of the invention to arrange the Montonen peripheral annular groove to be set in from the outer edge of the sheet in accord with the Yoshizawa teachings. The Examiner concludes from this that, since the range identified by Yoshizawa overlaps with the claimed limitation that said groove is

arranged 5-20 mm from the outer edge of the glass, the claimed range is rendered prima facia obvious over the combined prior art teachings.

Similarly with respect to claim 8, the Examiner asserts that the Yoshizawa reference (column 4, lines 1-3) clearly defines the dimensions of each of the grooves as having a width ranging from 2 mm to 15 mm and a depth ranging from 1 mm to 6 mm. The Examiner further asserts that these disclosed ranges clearly read on the claimed depth and width of the grooves of between 4-6 mm. Again, the Examiner asserts that since Montonen is silent regarding groove dimensions and given the analogous nature of the Montonen and Yoshizawa teachings, it would have been an obvious choice to provide a peripheral annular groove in the Montonen mold having dimensions in the range as taught by Yoshizawa.

Regarding claims 10 through 13, while the Examiner concedes that Montonen is silent regarding application of a cover between the mold-face and the heated glass surface, the Examiner contends that Yoshizawa provides for multiple configurations of cloth acting as the glass contact surface. The Examiner asserts that the mold covers, which are taught by Yoshizawa, are generally well appreciated in the art as a viable method of reducing the marring of a softened glass sheet by a full-face mold in a press bending operation and that the following teachings as set forth by Yoshizawa would for one of ordinary skill in the art seeking to minimize marring while bending softened glass sheets.

Therefore regarding claim 10, the Examiner asserts that Yoshizawa (column 4, lines 15-27) makes provisions for covering the molds in one or more layers of materials (see also metallic sheet 15 and surface member 16 in Fig. 2).

Further concerning claim 11, the Examiner states that the cited passage indicates that the surface member should preferably be a woven or felt layer of glass fibers, ceramic fibers, carbon fibers, metallic fibers aramid fibers, or the like.

The Examiner finds that Yoshizawa also indicates, with respect to claim 12, that "the metallic sheet 15 and surface member 16 may not he superposed, but are more effective when superposed." In Fig. 5, the Examiner asserts that it is also clearly implied that the surface contact member 15 has a finer structure than the metallic sheet 15. The Examiner feels that these two disclosures by Yoshizawa are collectively read on claim 12 as covering the full face mold by two or more cloths lying one upon the other or "superposed", and whereby the cloth facing the glass (surface contact member 16) has a finer structure than the cloth next to the molding face (metallic sheet 15).

As described in the previous rejection of claim 12, the Examiner asserts that Yoshizawa makes provision for covering the molding face of the full-face mold by only one cloth in the statement that "the metallic sheet 15 and surface member 16 may not be superposed...".

In regard to claim 14, the Examiner asserts that the immediate reference (column 4, lines 24-27) indicates that the surface member can be one of either a woven or felt

layer with a corresponding thickness ranging from 0.3 mm to 0.5 mm. The Examiner contends that this disclosure is understood to imply that the structure and the thickness of the cloth facing the glass sheet is adaptable and therefore can be adapted to the size of any impurity particle.

Since claim 21 is patentable over Montonen in view of Posney, then claims 6, 8, and 10-14, which depend directly or indirectly from claim 21, are also patentable, at least on this basis.

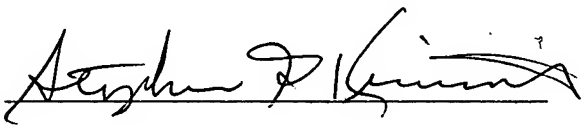
Further, applicants assert that Yoshizawa does nothing to overcome the shortcomings of Montonen and Posney. Therefore, claims 6, 8, and 10-14 are patentable over the combined teachings of Montonen and Posney as applied to claim 21, and further in view of Yoshizawa, as the claimed invention defined thereby is not suggested within either Montonen, Posney, or Yoshizawa, nor is there any suggestion or motivation to modify or combine these references' teachings in order to teach or suggest the claimed limitations, as required by 35 U.S.C. § 103.

Consequently, claims 6, 8, and 10-14 are patentable over the combined teachings of Montonen and Posney as applied to claim 21, and further in view of Yoshizawa. Accordingly, the withdrawal of the rejections of claims 6, 8, and 10-14, and the favorable reconsideration of claims 6, 8, and 10-14 are respectfully requested.

CONCLUSION

For the foregoing reasons, it is submitted that the claims on appeal each define subject matter which is novel and would not have been obvious to one of ordinary skill in the art at the time the invention was made. Accordingly, all of the claims on appeal are believed to be entitled to allowance, and a favorable decision to that end is courteously solicited.

Respectfully submitted,



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8. Claims Appendix

2. The press bending station of claim 21, wherein the holes are selectively connected to a negative pressure source.

3. The press bending station of claim 21, wherein the holes are selectively connected to a positive pressure source.

4. The press bending station of claim 21, wherein several holes are connected together by the at least one peripheral annular groove formed in the surface of the molding face of the full-face mold.

6. The press bending station of claim 4, wherein the at least one peripheral annular groove is arranged approximately 5-20 mm from the outer edge of the glass sheet.

8. The press bending station of claim 6, wherein the depth and width of the at least one peripheral annular groove are both in the range of 4-6 mm respectively.

9. The press bending station of claim 8, wherein additional flow channels and through-holes are provided in the molding face of the full-face mold inside the area enclosed by the at least one peripheral annular groove.

10. The press bending station of claim 9, wherein the bending tools are each covered by at least one air-permeable cloth.

11. The press bending station of claim 10, wherein the permeable cloth is chosen from a group of materials including stainless steel, fiber glass, poly para-phenyleneterephthalamide fibers, polybenzoxazole, graphite fibers, or blended weaves thereof.

12. The press bending station of claim 10, wherein the molding face of the full-face mold is covered by two or more cloths lying one upon the other, whereby the cloth facing the glass sheet has a finer structure than the cloth lying next to the molding face of the full-face mold.

13. The press bending station of claim 10, wherein the molding face of the full-face mold is covered by only one cloth.

14. The press bending station of claim 13, wherein the structure and the thickness of the cloth facing the glass sheet is adapted to the size of any impurity particles.

15. The press bending station of claim 14, wherein the full-face mold is chosen from the group consisting of ceramic, aluminum, stainless steel, compositions that include fused silicas, or combinations thereof.

16. The press bending station of claim 10, wherein the bending tools can be heated electrically, with hot oil, air, or other fluids.

19. A press bending station having two opposing molds, the first mold having a major surface with at least one peripheral annular groove thereon, at least one hole defined therein, the hole being disposed in fluid communication with the at least one peripheral annular groove and selectively connected to a negative pressure source for holding material to the surface, thus allowing the material to be shaped into a part when the molds are urged together.

20. The mold of claim 18, wherein the hole is selectively connected to a positive pressure source for releasing the material from the surface.

21. A press bending station for the bending of glass sheets, comprising:

a full-face mold having a mold face, the mold face having at least one peripheral annular groove formed in the surface thereof, the at least one peripheral annular groove having a plurality of holes located therein; and

an annular mold;

wherein, the at least one peripheral annular groove is formed in a peripheral area that corresponds to the molding contact area where a glass sheet is pressed between the full-face mold and the annular mold.

9. Evidence Appendix

None

10. Related Proceedings Appendix

None